



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 143384

TO: Phillip Gambel
Location: 3e81 / 3c70
Wednesday, January 26, 2005
Art Unit: 1644
Phone: 272-0844
Serial Number: 08 / 994468

From: Jan Delaval
Location: Biotech-Chem Library
Rem 1a51
Phone: 272-2504

jan.delaval@uspto.gov

Search Notes

This Page Blank (uspto)

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 26, 2005, 08:53:17 ; Search time 40 Seconds
(without alignments)
565.273 Million cell updates/sec

Title: US-08-994-468-6
Perfect score: 1242
Sequence: 1 MTVLPAWSTTYLLLLLLL.....RPGEQVPPVPQDLLLLVH 235

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues
Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_79:.*
1: pir1:.*
2: pir2:.*
3: pir3:.*
4: pir4:.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1242	100.0	235	I38440	flt3 ligand - huma
2	864.5	69.6	245	S43293	FLT3/FLK2 ligand (
3	834	67.1	178	I39076	Flt3 ligand alterm
4	768.5	61.9	231	A49265	Flt3/Flk-2 ligand
5	606.5	48.8	220	S43291	FLT3/FLK2 ligand (
6	606.5	48.8	220	I58343	flt3 ligand isofor
7	93	7.5	1217	T22672	hypothetical prote
8	92	7.4	661	TNBE12	74K alpha trans-in
9	89.5	7.2	474	T19543	hypothetical prote
10	89	7.2	387	T148201	adhalin - golden h
11	89	7.2	793	S60735	splicing factor SF
12	88.5	7.1	238	AB1990	hypothetical prote
13	88.5	7.1	1386	T00257	hypothetical prote
14	88	7.1	753	JQ0532	OP protein - Kenne
15	87.5	7.0	479	A32290	protein-tyrosine-p
16	87	7.0	910	A53137	tyrosine kinase re
17	86.5	7.0	590	A40437	glutamic acid-rich
18	86	6.9	299	T17832	hypothetical prote
19	86	6.9	485	A33647	sulfated surface g
20	86	6.9	746	T28004	hypothetical prote
21	85	6.8	289	A87646	hypothetical prote
22	85	6.8	366	A37374	PC gamma (Igg) rec
23	84	6.8	263	T03162	tegument protein 6
24	84	6.8	757	A39283	gamma-glutamyl car
25	83.5	6.7	199	E75630	hypothetical prote
26	83.5	6.7	530	T45690	transactivator EBN
27	83	6.7	1509	T19486	hypothetical prote
28	82.5	6.6	418	T19800	hypothetical prote
29	82.5	6.6	426	T136948	Ig epsilon-chain -

ALIGNMENTS

RESULT 1

I38440
flt3 ligand - human
C:Species: Homo sapiens (man)
C>Date: 29-May-1998 #sequence revision 29-May-1998 #text_change 09-Jul-2004
C/Accession: I38440; I39075; S43292
R:Lyman, S.D.; James, L.; Johnson, L.; Brasel, K.; de Vries, P.; Escobar, S.S.; Downey, Blood 83, 2795-2801, 1994
A>Title: Cloning of the human homologue of the murine flt3 ligand: a growth factor for A/Reference number: I38440; MUID:94235842; PMID:8180375
A/Accession: I38440
A>Status: preliminary; translated from GB/EMBL/DBJ
A/Molecule type: mRNA
A/Residues: 1-235 <RES>
A/Cross-references: UNIPROT:P49771; EMBL:U03858; NID:g494978; PIDN:AAAI9825.1; PID:g494 R:Lyman, S.D.; Stocking, K.; Davison, B.; Fletcher, F.; Johnson, L.; Escobar, S. Oncogene 11, 1165-1172, 1995
A>Title: Structural analysis of human and murine flt3 ligand genomic loci.
A/Reference number: I39075; MUID:96032581; PMID:7566977
A/Accession: I39075
A>Status: preliminary; translated from GB/EMBL/DBJ
A/Molecule type: DNA
A/Residues: 1-235 <RE2>
A/Cross-references: EMBL:U29874; NID:g1072036; PIDN:AAA90949.1; PID:g1072037 R:Hannum, C.; Culpepper, J.; Campbell, D.; McClanahan, T.; Zurawski, S.; Bazan, J.F.; felt, A.; Muench, M.; Keiner, G.; Namikawa, R.; Rennick, D.; Roncarolo, M.G.; Zlotnik, Nature 368, 643-648, 1994
A>Title: Ligand for FLT3/FLK2 receptor tyrosine kinase regulates growth of haematopoiet A/Reference number: S43290; MUID:94195428; PMID:8145851
A/Accession: S43292
A>Status: preliminary
A/Molecule type: mRNA
A/Residues: 1-71, 'A', 73-235 <HAN>
A/Cross-references: GB:U04806; NID:g483844; PIDN:AAAI7999.1; PID:g483845
A/Note: the authors translated the codon AGT for residue 25 as Met
C/Genetics:
A/Introns: 11/3; 48/3; 56/3; 114/3; 161/1; 220/3

Query Match	100.0%;	Score	1242;	DB	2;	Length	235;
Best Local Similarity	100.0%;	Pred. No.	2.6e-98;				
Matches	235;	Conservative	0;	Mismatches	0;	Indels	0;
Qy	1	MTVLPAWSTTYLLLLLLLLSSGLSGTQDCSFQHSPISSDFAVKIRELSDYLLQDYPTV	60				
Db	1	MTVLPAWSTTYLLLLLLLLSSGLSGTQDCSFQHSPISSDFAVKIRELSDYLLQDYPTV	60				
Qy	61	ASNLQBELCGGLWRLVLAORWNERLKTAVGSKNOGLERVNTIHEVTVKAFOPPPSCL	120				
Db	61	ASNLQBELCGGLWRLVLAORWNERLKTAVGSKNOGLERVNTIHEVTVKAFOPPPSCL	120				
Qy	121	RFVQTNISRLQETSEQLVAKPWITRQNFSCRLEQCQDPSSTLPPPPWSPLEATAPT	180				
Db	121	RFVQTNISRLQETSEQLVAKPWITRQNFSCRLEQCQDPSSTLPPPPWSPLEATAPT	180				

Db 121 RFVQTNISRLLOETSEQLVAKPWITRONFSRCLELQCPDSTLPPWSPRPLEATPT 180

QY 181 APOPPILLLLPVGLLLAAACWCLHWQTRTRTPRGQVPPVSPQDLLLVEH 235

Db 181 APOPPILLLLPVGLLLAAACWCLHWQTRTRTPRGQVPPVSPQDLLLVEH 235

RESULT 2

S43293

FLT3/FLK2 ligand (clone S109) - human

C:Species: Homo sapiens (man)

C>Date: 20-Oct-1994 #sequence_revision 10-Nov-1995 #text_change 17-Mar-1999

C/Accession: S43293

R:Hannum, C.; Culpepper, J.; Campbell, D.; McClanahan, T.; Zurawski, S.; Bazan, J.F.; Ka-

felt, A.; Muench, M.; Kellner, G.; Namikawa, R.; Rennick, D.; Roncarolo, M.G.; Zlotnik, A.

Nature 368, 643-648, 1994

A>Title: Ligand for FLT3/FLK2 receptor tyrosine kinase regulates growth of haematopoietic

A/Reference number: S43290; MUID:94195428; PMID:8145851

A/Accession: S43293

A>Status: preliminary

A/Molecule type: mRNA

A/Residues: 1-245 <HAN>

A>Note: the authors translated the codon AGT for residue 25 as Met

Query Match 69.6%; Score 864.5; DB 2; Length 245;

Best Local Similarity 73.0%; Pred. No. 3.4e-66;

Matches 176; Conservative 7; Mismatches 27; Indels 31; Gaps 3;

QY 1 MTVLAPAWSPPTYYLLLLSSGLSGTQDCSFQHSPISSDPAVKIRELSYLLQDYPVT 60

Db 1 MTVLAPAWSPPTYYLLLLSSGLSGTQDCSFQHSPISSDPAVKIRELSYLLQDYPVT 60

QY 61 ASNLQDELCGGLWRLVLAQRWMLKTVAGSKMOGLLERNVTEIHFVTKCAFQPPSPCL 120

Db 61 ASNLQDELCGGLWRLVLAQRWMLKTVAGSKMOGLLERNVTEIHFVTKCAFQPPSPCL 120

QY 121 RFVQTNISRLLOETSEQLVAKPWITRONFSRCLELQCPDSTLPPWSPRPLEATPT 180

Db 121 RFVQTNISRLLOETSEQLVAKPWITRONFSRCLELQCPDSTLPPWSPRPLEATPT 180

QY 181 APOPPILLLLPVGLLLAAACWCLHWQTRTRTPRGQVPPVSP 227

Db 178 WPRPHGEDTEAHRGESP-----PLLLLLPVGLLLAAACWCLHWQTRTRTPRGQVPPVSP 227

QY 228 Q 228

Db 223 E 223

RESULT 3

I39076

FLT3 ligand alternatively spliced isoform - human

C:Species: Homo sapiens (man)

C>Date: 29-May-1998 #sequence_revision 29-May-1998 #text_change 09-Jul-2004

C/Accession: I39076

R:Lyman, S.D.; Stocking, K.; Davison, B.; Fletcher, F.; Johnson, L.; Escobar, S.

Oncogene 11, 1165-1172, 1995

A>Title: Structural analysis of human and murine flt3 ligand genomic loci.

A/Reference number: I39075; MUID:96032581; PMID:7566977

A/Accession: I39076

A>Status: preliminary

A/Molecule type: DNA

A/Residues: 1-178 <RES>

A/Cross-references: UNIPROT:P49771; EMBL:U29874; NID:g1072036; PIDN:AAA90950.1; PID:g107

A/Introns: 11/3; 48/3; 66/3; 114/3; 161/1

Query Match

Best Local Similarity 67.1%; Score 834; DB 2; Length 178;

Matches 160; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MTVLAPAWSPPTYYLLLLSSGLSGTQDCSFQHSPISSDPAVKIRELSYLLQDYPVT 60

Db 1 MTVLAPAWSPPTYYLLLLSSGLSGTQDCSFQHSPISSDPAVKIRELSYLLQDYPVT 60

QY 61 ASNLQDELCGGLWRLVLAQRWMLKTVAGSKMOGLLERNVTEIHFVTKCAFQPPSPCL 120

Db 61 ASNLQDELCGGLWRLVLAQRWMLKTVAGSKMOGLLERNVTEIHFVTKCAFQPPSPCL 120

QY 121 RFVQTNISRLLOETSEQLVAKPWITRONFSRCLELQCP 160

Db 121 RFVQTNISRLLOETSEQLVAKPWITRONFSRCLELQCP 160

RESULT 4

A49265

flt3/fik-2 ligand precursor - mouse

C:Species: Mus musculus (house mouse)

C>Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 09-Jul-2004

C/Accession: A49265; I49347; I49346; S43290

R:Lyman, S.D.; James, L.; Vanden Bos, T.; de Vries, P.; Brasel, K.; Gliniak, B.; Hollin-

D.; Williams, D.E.; Beckmann, M.P.

Cell 75, 1157-1167, 1993

A>Title: Molecular cloning of a ligand for the flt3/fik-2 tyrosine kinase receptor: a p

A/Reference number: A49265; MUID:94084791; PMID:7505204

A/Accession: A49265

A>Status: preliminary

A/Molecule type: mRNA

A/Residues: 1-231 <LYM>

A/Cross-references: UNIPROT:P49772; GB:I23636; NID:g439441; PIDN:AAA9436.1; PID:g43944.

R:Lyman, S.D.; Stocking, K.; Davison, B.; Fletcher, F.; Johnson, L.; Escobar, S.

Oncogene 11, 1165-1172, 1995

A>Title: Structural analysis of human and murine flt3 ligand genomic loci.

A/Reference number: I39075; MUID:96032581; PMID:7566977

A/Accession: I49347

A>Status: preliminary

A/Molecule type: DNA

A/Residues: 1-163, 'G', '165, 'HVAG' <RES>

A/Cross-references: EMBL:U29875; NID:g1072039; PIDN:AAA90952.1; PID:g1072041

A/Accession: I49346

A>Status: preliminary

A/Molecule type: DNA

A/Residues: 1-197, 'L', '198-231 <RE2>

A/Cross-references: EMBL:U29875; NID:g1072039; PIDN:AAA90951.1; PID:g1072040

R:Hannum, C.; Culpepper, J.; Campbell, D.; McClanahan, T.; Zurawski, S.; Bazan, J.F.; K-

felt, A.; Muench, M.; Kellner, G.; Namikawa, R.; Rennick, D.; Roncarolo, M.G.; Zlotnik, S.

Nature 368, 643-648, 1994

A>Title: Ligand for FLT3/FLK2 receptor tyrosine kinase regulates growth of haematopoietic

A/Reference number: S43290; MUID:94195428; PMID:8145851

A/Accession: S43290

A>Status: preliminary

A/Molecule type: mRNA

A/Residues: 1-197, 'L', '198-231 <HAN>

A/Experimental source: clone T110

A>Note: the sequence from Fig. 2c is inconsistent with that from Fig. 2a in having 4-Va;

C/Genetics: Introns: 11/3; 49/3; 67/3; 115/3; 164/1; 224/3

C/Keywords: transmembrane protein

Query Match

Best Local Similarity 61.9%; Score 768.5; DB 2; Length 231;

Matches 163; Conservative 17; Mismatches 43; Indels 9; Gaps 4;

QY 1 MTVLAPAWSPPTYYLLLLSSGLSGTQDCSFQHSPISSDPAVKIRELSYLLQDYPVT 59

Db 1 MTVLAPAWSPPTYYLLLLSSGLSGTQDCSFQHSPISSDPAVKIRELSYLLQDYPVT 60

QY 60 VASNLQDELCGGLWRLVLAQRWMLKTVAGSKMOGLLERNVTEIHFVTKCAFQPPSPCL 119

Db 61 VASNLQDELCGGLWRLVLAQRWMLKTVAGSKMOGLLERNVTEIHFVTKCAFQPPSPCL 120

QY 120 LRFVQTNISRLLOETSEQLVAKPWITR--ONFSRCLELQCPDSTLPPWSPRPLEAT 177

Db 121 LRFVQTNISRLLOETSEQLVAKPWITR--ONFSRCLELQCPDSTLPPWSPRPLEAT 180

QY 178 APTAQP--LILLLLPVGLLLAAACWCLHWQTRTRTPRGQVPPVSP 227

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 26, 2005, 08:54:42 ; Search time 192 Seconds
(without alignments)
704.235 Million cell updates/sec

Title: US-08-994-468-6
Perfect score: 1242
Sequence: 1 MVLAPAWSTTYLLLLLLL.....RPGEQVPPVSPQDLLLVEH 235

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1825181 seqs, 575374646 residues

Total number of hits satisfying chosen parameters: 1825181

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : UniProt_02.*

1: uniprot_sprot.*

2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1242	100.0	235	1 FL3L HUMAN	P49771 homo sapien
2	1145.5	92.2	236	2 Q86523	Q86523 papio cynoc
3	895.5	72.1	294	2 Q9MZV0	Q9MZV0 canis famil
4	894.5	72.0	291	2 Q9MZU9	Q9MZU9 felis silve
5	840	67.6	292	2 Q9GKE0	Q9GKE0 bos taurus
6	835	67.2	292	2 Q8WNW1	Q8WNW1 bos taurus
7	768	61.8	232	1 FL3L MOUSE	P49772 mus musculus
8	746	60.1	274	2 Q9GKD9	Q9GKD9 bos taurus
9	602.5	48.5	172	2 Q61104	Q61104 mus musculus
10	578	46.5	169	2 Q8VCH4	Q8VCH4 mus musculus
11	276	22.2	54	2 Q7Z6N5	Q7Z6N5 homo sapien
12	276	22.2	54	2 AAH11914	AAH11914 homo sapi
13	112.5	9.1	579	2 Q9LGG8	Q9LGG8 oryza sativ
14	110	8.9	219	2 Q8DKL7	Q8DKL7 synechococc
15	105	8.5	208	2 Q8L418	Q8L418 oryza sativ
16	100.5	8.1	1809	2 STARC_MOUSE	Q8Vim6 mus musculus
17	97.5	7.9	669	2 Q8GYA4	Q8GYA4 arabidopsis
18	96	7.7	474	2 Q7VU97	Q7VU97 bordetella
19	96	7.7	474	2 Q7WGA9	Q7WGA9 bordetella
20	95.5	7.7	439	2 Q8N775	Q8N775 homo sapien
21	95.5	7.7	658	2 Q8H785	Q8H785 arabidopsis
22	95.5	7.7	829	2 Q6VAB6	Q6VAB6 homo sapien
23	95.5	7.7	829	2 AAQ24226	AAQ24226 homo sapi
24	95.5	7.7	1240	2 Q9DMH8	Q9DMH8 rat cytomeg
25	93.5	7.5	658	2 Q9C570	Q9C570 arabidopsis
26	93	7.5	1217	2 O17889	O17889 caenorhabdi
27	92.5	7.4	387	2 Q8VD70	Q8VD70 mus musculus
28	92.5	7.4	1400	2 Q9VDD2	Q9VDD2 drosophila
29	92	7.4	251	2 Q9HAD2	Q9HAD2 homo sapien
30	92	7.4	328	2 Q6ZHT9	Q6ZHT9 oryza sativ
31	92	7.4	328	2 BAD16812	BAD16812 oryza sat

32	92	7.4	328	2 BAD16893	BAD16893 oryza sat
33	92	7.4	661	1 AT12 VZVD	P09264 varicella-z
34	92	7.4	661	2 Q6QCP3	Q6QCP3 human herpe
35	92	7.4	661	2 AAT07694	AAT07694 human her
36	92	7.4	661	2 AAT07770	AAT07770 human her
37	92	7.4	1112	2 Q7RN90	Q7RN90 plasmodium
38	91.5	7.4	287	2 Q8DHH3	Q8DHH3 synechococc
39	91.5	7.4	308	2 Q8BPI5	Q8BPI5 mus musculus
40	91.5	7.4	674	2 Q8K4C2	Q8K4C2 mus musculus
41	91	7.3	292	2 Q7M5T5	Q7M5T5 porcine ade
42	90.5	7.3	5120	1 PCLO CHICK	Q9PU36 gallus gall
43	90	7.2	285	2 Q72JG0	Q72JG0 thermus t
44	90	7.2	285	2 AAS81158	AAS81158 thermus t
45	89.5	7.2	474	2 O17610	O17610 caenorhabdi

ALIGNMENTS

RESULT 1
FL3L HUMAN STANDARD; PRT; 235 AA.
AC P49771;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DE SL cytokine precursor (Fms-related tyrosine kinase 3 ligand) (Flt3 ligand) (Flt3L).
GN Name=FLT3LG;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=941195428; PubMed=8145851;
RA Hannum C., Culpepper J., Campbell D., McClanahan T., Zurawski S., Bazan J.F., Kastelein R., Hudak S., Wagner J., Mattson J., Luh J., Duda G., Martina N., Peterson D., Menon S., Shanafelt A., Muench M., Kelner G., Namikawa R., Rennick D., Roncarolo M.G., Zlotnik A., Roenigk O., Dubreuil P., Birnbaum D., Lee F.;
RT "Ligand for FLT3/FLK2 receptor tyrosine kinase regulates growth of haematopoietic stem cells and is encoded by variant RNAs.";
RN Nature 368:643-648(1994).
RP SEQUENCE FROM N.A.
RX MEDLINE=94235842; PubMed=8180375;
RA Lyman S.D., James L., Johnson L., Brasel K., de Vries P., Escobar S.S., Downey H., Splett R.R., Beckmann M.P., McKenna H.J.;
RT "Cloning of the human homologue of the murine flt3 ligand: a growth factor for early hematopoietic progenitor cells.";
RN Blood 83:2795-2801(1994).
RP SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING.
RX MEDLINE=96032581; PubMed=7566977;
RA Lyman S.D., Stocking K., Davison B., Fletcher F., Johnson L., Escobar S.;
RT "Structural analysis of human and murine flt3 ligand genomic loci.";
RN Oncogene 11:1165-1172(1995).

X-RAY CRYSTALLOGRAPHY (2.2 ANGSTROMS).
MEDLINE=20343011; PubMed=10881197; DOI=10.1038/75896;
Savvides S.N., Boone T., Karplus P.A.;
RT "Flt3 ligand structure and unexpected commonalities of helical bundles and cysteine knots.";
RN Nat. Struct. Biol. 7:486-491(2000).
CC -|- FUNCTION: Stimulates the proliferation of early hematopoietic cells. Synergizes well with a number of other colony stimulating factors and interleukins.
CC -|- SUBUNIT: Homodimer (isoform 2).
CC -|- SUBCELLULAR LOCATION: Type I membrane protein (isoform 1).
CC -|- SECRETED (isoform 2).
CC -|- ALTERNATIVE PRODUCTS:

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 26, 2005, 09:47:10 ; Search time 157 Seconds
(without alignments)
536.951 Million cell updates/sec

Title: US-08-994-468-6
Perfect score: 1242
Sequence: 1 MTVLAPAMSTTYLLLLLL.....RPGEQVPPVSPQDLLLVEH 235

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2002273 seqs, 358729299 residues

Total number of hits satisfying chosen parameters: 2002273

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_23Sep04:.*
1: Geneseqp1980s:.*
2: Geneseqp1990s:.*
3: Geneseqp2000s:.*
4: Geneseqp2001s:.*
5: Geneseqp2002s:.*
6: Geneseqp2003as:.*
7: Geneseqp2003bs:.*
8: Geneseqp2004s:.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1242	100.0	235	2 AAR67541	Aar67541 Human flt
2	1242	100.0	235	2 AAW67769	Aaw67769 Human flt
3	1242	100.0	235	3 AAY69719	Aay69719 Full leng
4	1242	100.0	235	4 AAB20192	Aab20192 Human Flt
5	1242	100.0	235	5 ABB08129	Abb08129 Human Flt
6	1242	100.0	235	5 ABG31626	Abg31626 Human Flt
7	1242	100.0	235	5 AAO19091	Aao19091 C neoform
8	1242	100.0	235	6 AAG79949	Aag79949 Secreted
9	1242	100.0	235	6 ABG74239	Abg74239 Human Flt
10	1242	100.0	235	7 ADD22874	Add22874 Human flt
11	1242	100.0	235	7 ADD80915	Add80915 Amino aci
12	1242	100.0	235	7 ADE48117	Ade48117 Human Flt
13	1242	100.0	235	7 ADE80752	Ade80752 Microsate
14	1242	100.0	235	8 ADL09160	Adl09160 Human fms
15	1242	100.0	235	8 ADO19772	Ado19772 Human PRO
16	1242	100.0	235	8 ADO78380	Ado78380 Human flt
17	1237	99.6	235	6 AAG79950	Aag79950 Secreted
18	1236	99.5	235	2 AAR66175	Aar66175 Human S86
19	1236	99.5	235	4 AAB20194	Aab20194 Human Flt
20	1236	99.5	235	8 ADH17061	Adh17061 Human FLT
21	1236	99.5	235	8 ADO19576	Ado19576 Human PRO
22	1124	90.5	212	3 AAY69721	Aay69721 Human flt
23	1114	89.7	209	2 AAW69007	Aaw69007 Human flt
24	1114	89.7	209	3 AAY69720	Aay69720 Mature wi
25	1110	89.4	209	3 AAY69729	Aay69729 Human flt

Aay69727 Human flt
Aay69723 Human flt
Aay69726 Human flt
Aay69722 Human flt
Aay69724 Human flt
Aay69728 Human flt
Aay69725 Human flt
Aab20195 Human Flt
Aag79948 Secreted
Aay58204 Canine Fl
Aay58210 Feline Fl
Aab20193 Human flt
Aab20192 Human flt
Aab20194 Human flt
Aay58206 Canine ma
Aay58211 Feline ma
Aay58210 Feline ma
Aaw67768 Murine fl
Aab20186 Mouse Flt
Abg74238 Mouse Flt

ALIGNMENTS

RESULT 1

AAR67541
ID AAR67541 standard; protein; 235 AA.

XX AAR67541;

XX 25-MAR-2003 (revised)

DT 05-AUG-1995 (first entry)

XX Human flt-3 ligand.

DE Human flt-3 ligand.

XX Fit-3 ligand; flt3-L; anemia; cancer; AIDS; gene therapy.

KW Homo sapiens.

XX Homo sapiens.

XX Key Location/Qualifiers

FT Peptide 1..26

FT /label= sig_peptide

FT /note= "signal peptide may extend to position 27"

FT Domain 27..182

FT /label= Extracellular domain

FT /note= "extracellular domain may start at position 28"

FT Domain 183..205

FT /label= Transmembrane_domain

FT Domain 206..235

FT /label= Cytoplasmic_domain

DN EP627487-A2.

XX 07-DEC-1994.

XX 19-MAY-1994; 94EP-00303575.

XX 24-MAY-1993; 93US-00068394.

XX 12-AUG-1993; 93US-00106463.

XX 25-AUG-1993; 93US-00111758.

XX 03-DEC-1993; 93US-00162407.

XX 07-MAR-1994; 94US-00209502.

XX 11-MAY-1994; 94US-00243545.

XX (IMMV) IMMUNEX CORP.

PA Lyman SD, Beckmann MP;

PI WPI; 1995-008071/02.

XX N-PSDB; AAQ79079.

XX Isolated ligands for flt 3 receptors - useful for treating anaemia, AIDS

PT and various cancers.
 XX Disclosure; Page 29-30; 33pp; English.
 XX
 CC A human T-cell lambda-gt10 random primed cDNA library was screened with a
 CC fragment corresponding to the extracellular domain of mouse flt3 ligand
 CC (flt3-L) (nt 103-516 of AAQ9076) to isolate human flt3-L cDNA. Flt-3
 CC stimulates progenitor and stem cells, and can be used e.g. in gene
 CC therapy protocols. (Updated on 25-MAR-2003 to correct PN field.)
 XX
 SQ Sequence 235 AA;

Query Match 100.0%; Score 1242; DB 2; Length 235;
 Best Local Similarity 100.0%; Pred. No. 1.9e-109; Mismatches 0; Indels 0; Gaps 0;
 Matches 235; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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 Db 1 MTVLAPAWSPPTTYLLLLLLSSGLSGTQDCSFQHSPISSDFAVKIRELSYLLQDPVTV 60
 QY 61 ASNLQDEELCGGLWRLVLAQRMWRLKTVAGSKMGLLERNVTEIHFVTKCAFQPPSCL 120
 Db 61 ASNLQDEELCGGLWRLVLAQRMWRLKTVAGSKMGLLERNVTEIHFVTKCAFQPPSCL 120
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 Db 181 APQPLLLLLLPVGLLLAAWCLHWQTRRTTRTPRGEQVPPVPSQDLLLLVEH 235

RESULT 2
 AA67769
 ID AA67769 standard; protein; 235 AA.
 AC AA67769;

DT 25-MAR-1999 (first entry)

DE Human flt3-ligand.

KW Antigen-specific peripheral immune tolerance; flt3-ligand; flt3-L;
 KW immunogenic; autoimmune disease; organ transplantation; food allergy;
 KW tissue transplantation.

OS Homo sapiens.

PN WO9857655-A1.

PD 23-DEC-1998.

PF 12-JUN-1998; 98WO-US012085.

PR 17-JUN-1997; 97US-00877421.

PA (IMMV) IMMUNEX CORP.

PI Abbott NM, Mowat AM, Viney JL;

DR WPI; 1999-070422/06.

DR N-PSDB; AAV81506.

PT Methods for initiating or enhancing antigen specific immune tolerance -
 PT by using murine or human flt3 ligand.

PS Claim 1; Page 14-15; 25pp; English.

XX A method has been developed of initiating or enhancing: (i) an antigen-
 CC specific immune tolerance; or (ii) immunotolerance of a therapeutic
 CC immunogenic molecule by addition of a polypeptide, before, after or with
 CC the mucosal administration of an immunotolerizing amount of the antigen

CC or therapeutic molecule, respectively. The polypeptide is capable of
 CC binding the flt3 receptor and is: a) amino acids 28-x of murine flt3
 CC ligand (flt3-L), where x is an amino acid between 163-231; b) amino acids
 CC 28-y of human flt3-L, where y is an amino acid between 160-235; and c) a
 CC polypeptide that has at least 90% identity to the polypeptides of either
 CC (a) or (b). The method ameliorates the effects of autoimmune diseases,
 CC food allergies or organ or tissue rejection following transplantation.
 CC Administration of flt3-L allows lower doses of antigens to be used in
 CC vivo for mucosally administered antigens. The present sequence represents
 CC human flt3-L
 XX
 SQ Sequence 235 AA;

Query Match 100.0%; Score 1242; DB 2; Length 235;
 Best Local Similarity 100.0%; Pred. No. 1.9e-109; Mismatches 0; Indels 0; Gaps 0;
 Matches 235; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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RESULT 3
 AA69719
 ID AA69719 standard; protein; 235 AA.
 AC AA69719;

DT 05-JUL-2000 (first entry)

DE Full length wild type human flt-3 protein.

KW Immunomodulator; immunosuppressive; cytostatic; antianemic; anti-HIV;
 KW neuroprotective; antiallergic; flt3 ligand; flt3-L; wild type; allergy;
 KW cell surface tyrosine kinase receptor; hematopoietic progenitor cell;
 KW cellular expansion; cellular differentiation; natural killer cell;
 KW cancer; dendritic cell; immune response; autoimmunity; immunosuppression;
 KW myelodysplasia; aplastic anemia; HIV infection; lymphoma; neuroblastoma;
 KW multiple myeloma; leukemia.

XX Homo sapiens.

OS WO200001823-A2.

PN 13-JAN-2000.

PF 25-JUN-1999; 99WO-US014296.

PR 02-JUL-1998; 98US-00109100.

PA (IMMV) IMMUNEX CORP.

PI Graddis TJ, McGrew JT;

DR WPI; 2000-182115/16.

DR N-ESDB; AAZ59064.

XX Mutant soluble flt3 ligand polypeptide used in cellular expansion, immune
 CC response stimulation or treatment of pathological conditions contains
 CC amino acid substitutions at positions 8, 84, 118 or 122.

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 26, 2005, 09:16:48 ; Search time 148 Seconds
(without alignments)

573.669 Million cell updates/sec

Title: US-08-994-468-6

Perfect score: 1242

Sequence: 1 MVLPAWSPTTYLLLLLLL.....RPGQVPPVSPQDILLVH 235

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1608061 seqs, 361289386 residues

Total number of hits satisfying chosen parameters: 1608061

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

Published Applications AA:*
1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
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20: /cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
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2	1242	100.0	235	9	US-09-448-378-1
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4	1242	100.0	235	9	US-09-904-536-1
5	1242	100.0	235	10	US-09-891-498-4
6	1242	100.0	235	13	US-10-095-449-6
7	1242	100.0	235	14	US-10-241-927-2
8	1242	100.0	235	14	US-10-314-035-6
9	1242	100.0	235	15	US-10-401-364-1
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14	1242	100.0	235	17	US-10-688-845-85	Sequence 85, Appl
15	1237	99.6	235	10	US-09-891-498-5	Sequence 5, Appl
16	1237	99.6	235	17	US-10-478-421-5	Sequence 5, Appl
17	1236	99.5	235	14	US-10-116-275-174	Sequence 174, App
18	1236	99.5	235	15	US-10-440-464-60	Sequence 60, Appl
19	1124	90.5	212	9	US-09-904-536-10	Sequence 10, Appl
20	1114	89.7	209	9	US-09-904-536-18	Sequence 18, Appl
21	1114	89.7	209	16	US-10-644-355A-145	Sequence 145, App
22	1110	89.4	209	9	US-09-904-536-9	Sequence 9, Appl
23	1110	89.4	209	9	US-09-904-536-12	Sequence 12, Appl
24	1110	89.4	209	9	US-09-904-536-14	Sequence 14, Appl
25	1110	89.4	209	9	US-09-904-536-17	Sequence 17, Appl
26	1108	89.2	209	9	US-09-904-536-11	Sequence 11, Appl
27	1108	89.2	209	9	US-09-904-536-15	Sequence 15, Appl
28	1107	89.1	209	9	US-09-904-536-13	Sequence 13, Appl
29	1106	89.0	209	9	US-09-904-536-8	Sequence 8, Appl
30	1100	88.6	209	9	US-09-904-536-16	Sequence 16, Appl
31	972.5	78.3	414	17	US-10-723-003-4	Sequence 4, Appl
32	972.5	78.3	582	17	US-10-723-003-68	Sequence 68, Appl
33	972.5	78.3	657	17	US-10-723-003-48	Sequence 48, Appl
34	972.5	78.3	661	17	US-10-723-003-28	Sequence 28, Appl
35	972.5	78.3	661	17	US-10-723-003-34	Sequence 34, Appl
36	972.5	78.3	655	17	US-10-723-003-62	Sequence 62, Appl
37	963	77.5	189	10	US-09-891-498-2	Sequence 2, Appl
38	963	77.5	189	17	US-10-478-421-2	Sequence 2, Appl
39	957	77.1	182	17	US-10-723-003-2	Sequence 2, Appl
40	957	77.1	365	17	US-10-723-003-64	Sequence 64, Appl
41	957	77.1	400	17	US-10-723-003-66	Sequence 66, Appl
42	895.5	72.1	234	14	US-10-218-654-7	Sequence 7, Appl
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44	894.5	72.0	291	14	US-10-218-654-44	Sequence 44, Appl
45	894.5	72.0	291	14	US-10-262-439-44	Sequence 44, Appl

ALIGNMENTS

RESULT 1

US-08-994-468-6
; Sequence 6, Application US/08994468
; Publication No. US20030148516A1
; GENERAL INFORMATION:
; APPLICANT: Lyman, Stewart D.
; Beckmann, M. Patricia
; TITLE OF INVENTION: Ligands for flt3/flk-2 Receptors
; NUMBER OF SEQUENCES: 8
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Stephen L. Malaska, Immunex Corporation
; STREET: 51 University Street
; CITY: Seattle
; STATE: Washington
; COUNTRY: US
; ZIP: 98101
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: Apple Macintosh
; OPERATING SYSTEM: Macintosh 7.0.1
; SOFTWARE: Microsoft Word, Version #5.1
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/994,468
; FILING DATE: 19-Dec-1997
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/162,407
; FILING DATE: <Unknown>
; APPLICATION NUMBER: 08/111,758
; FILING DATE: August 25, 1993
; APPLICATION NUMBER: 08/106,463
; FILING DATE: August 12, 1993
; APPLICATION NUMBER: 08/068,394
; FILING DATE: May 24, 1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Malaska, Stephen L.

```

/ REGISTRATION NUMBER: 32,655
/ REFERENCE/DOCKET NUMBER: 2813-C
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: (206) 587-0430
/ TELEFAX: (206) 233-0644
/ TELEX: 756822
/ INFORMATION FOR SEQ ID NO: 6:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 235 amino acids
/ TYPE: amino acid
/ TOPOLOGY: linear
/ MOLECULE TYPE: protein
/ SEQUENCE DESCRIPTION: SEQ ID NO: 6:
US-08-994-468-6

Query Match      100.0%; Score 1242; DB 8; Length 235;
Best Local Similarity 100.0%; Pred. No. 8e-102;
Matches 235; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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RESULT 2

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US-09-448-378-1
/ Sequence 1, Application US/09448378
/ Patent No. US20020034517A1
/ GENERAL INFORMATION:
/ APPLICANT: Brasel, Kenneth
/ TITLE OF INVENTION: Dendritic Cell Stimulatory Factor
/ FILE REFERENCE: 2836-D
/ CURRENT APPLICATION NUMBER: US/09/448,378
/ CURRENT FILING DATE: 1999-11-23
/ NUMBER OF SEQ ID NOS: 2
/ SOFTWARE: PatentIn version 3.0
/ SEQ ID NO 1
/ LENGTH: 235
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-448-378-1

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Query Match      100.0%; Score 1242; DB 9; Length 235;
Best Local Similarity 100.0%; Pred. No. 8e-102;
Matches 235; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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RESULT 3

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US-09-983-806-6
/ Sequence 6, Application US/09983806
/ Patent No. US20020107365A1
/ GENERAL INFORMATION:
/ APPLICANT: Lyman, Stewart D.
/ Beckmann, M. Patricia
/ TITLE OF INVENTION: Ligands for flt3/flk-2 Receptors
/ NUMBER OF SEQUENCES: 8
/ CORRESPONDENCE ADDRESS:
/ ADDRESSEE: Stephen L. Malaska, Immunex Corporation
/ STREET: 51 University Street
/ CITY: Seattle
/ STATE: Washington
/ COUNTRY: US
/ ZIP: 98101
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ COMPUTER: Apple Macintosh
/ OPERATING SYSTEM: Macintosh 7.0.1
/ SOFTWARE: Microsoft Word, Version #5.1
/ CURRENT APPLICATION DATA: US/09/983,806
/ APPLICATION NUMBER: US/09/983,806
/ FILING DATE: 25-Oct-2001
/ CLASSIFICATION: 530
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: US/08/444,626
/ FILING DATE: 19-MAY-1995
/ APPLICATION NUMBER: US/08/162,407
/ FILING DATE: 03-DEC-1993
/ APPLICATION NUMBER: 08/111,758
/ FILING DATE: August 25, 1993
/ APPLICATION NUMBER: 08/106,463
/ FILING DATE: August 12, 1993
/ APPLICATION NUMBER: 08/068,394
/ FILING DATE: May 24, 1993
/ ATTORNEY/AGENT INFORMATION:
/ NAME: Malaska, Stephen L.
/ REGISTRATION NUMBER: 32,655
/ REFERENCE/DOCKET NUMBER: 2813-C
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: (206) 587-0430
/ TELEFAX: (206) 233-0644
/ TELEX: 756822
/ INFORMATION FOR SEQ ID NO: 6:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 235 amino acids
/ TYPE: amino acid
/ TOPOLOGY: linear
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21	894.5	72.0	291	4	US-09-322-409-44	Sequence 44, Appli
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; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-243-545-6

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DB 1 MTVLAPAWSPPTTYLLLLLLSSGLSGTDCSFQHSPISSDFAVKIRELSDYLLQDPVTV 60
QY 61 ASNLQDEELCGGLWRLVLAQRWMLKTVAGSKMGLLERNVTEHFVTKCAFQPPPSCL 120
DB 61 ASNLQDEELCGGLWRLVLAQRWMLKTVAGSKMGLLERNVTEHFVTKCAFQPPPSCL 120
QY 121 RFVQTNISRLQETSEQLVALKPWITRONFSCLELQCPDSSSTLPPWSPRPLEATPT 180
DB 121 RFVQTNISRLQETSEQLVALKPWITRONFSCLELQCPDSSSTLPPWSPRPLEATPT 180
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RESULT 2
US-08-993-962-6
; Sequence 6, Application US/08993962
; Patent No. 5843423
; GENERAL INFORMATION:
; APPLICANT: Lyman, Stewart D.
; APPLICANT: Beckmann, M. Patricia
; TITLE OF INVENTION: Ligands for flt3/flk-2 Receptors
; NUMBER OF SEQUENCES: 8
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Stephen L. Malaska, Immunex Corporation
; STREET: 51 University Street
; CITY: Seattle
; STATE: Washington
; COUNTRY: US
; ZIP: 98101
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: Apple Macintosh
; OPERATING SYSTEM: Macintosh 7.0.1
; SOFTWARE: Microsoft Word, Version #5.1
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/993,962
; FILING DATE: December 18, 1997
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/162,407
; FILING DATE: December 3, 1993
; APPLICATION NUMBER: 08/111,758
; FILING DATE: August 25, 1993
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/106,463
; FILING DATE: August 12, 1993
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/068,394
; FILING DATE: May 24, 1993
; CLASSIFICATION: 424
; ATTORNEY/AGENT INFORMATION:
; NAME: Malaska, Stephen L.
; REGISTRATION NUMBER: 32,655
; REFERENCE/DOCKET NUMBER: 2813-C
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (206) 587-0430
; TELEFAX: (206) 233-0644
; TELEX: 756822

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; INFORMATION FOR SEQ ID NO: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 235 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-993-962-6

Query Match      100.0%; Score 1242; DB 2; Length 235;
Best Local Similarity 100.0%; Pred. No. 5.8e-117;
Matches 235; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 MTVLAPAWSPPTTYLLLLLLSSGLSGTDCSFQHSPISSDFAVKIRELSDYLLQDPVTV 60
QY 61 ASNLQDEELCGGLWRLVLAQRWMLKTVAGSKMGLLERNVTEHFVTKCAFQPPPSCL 120
DB 61 ASNLQDEELCGGLWRLVLAQRWMLKTVAGSKMGLLERNVTEHFVTKCAFQPPPSCL 120
QY 121 RFVQTNISRLQETSEQLVALKPWITRONFSCLELQCPDSSSTLPPWSPRPLEATPT 180
DB 121 RFVQTNISRLQETSEQLVALKPWITRONFSCLELQCPDSSSTLPPWSPRPLEATPT 180
QY 181 APQPPLLLLLLPVGLLLAAAWCLHWQTRRRTPRGPGEQVPPVPSQDLLLLVEH 235
DB 181 APQPPLLLLLLPVGLLLAAAWCLHWQTRRRTPRGPGEQVPPVPSQDLLLLVEH 235

RESULT 3
US-09-160-841-6
; Sequence 6, Application US/09160841
; Patent No. 6190655
; GENERAL INFORMATION:
; APPLICANT: Lyman, Stewart D.
; APPLICANT: Beckmann, M. Patricia
; TITLE OF INVENTION: Ligands for flt3/flk-2 Receptors
; NUMBER OF SEQUENCES: 8
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Stephen L. Malaska, Immunex Corporation
; STREET: 51 University Street
; CITY: Seattle
; STATE: Washington
; COUNTRY: US
; ZIP: 98101
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: Apple Macintosh
; OPERATING SYSTEM: Macintosh 7.0.1
; SOFTWARE: Microsoft Word, Version #5.1
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/160,841
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/162,407
; FILING DATE: December 3, 1993
; APPLICATION NUMBER: 08/111,758
; FILING DATE: August 25, 1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/106,463
; FILING DATE: August 12, 1993
; APPLICATION NUMBER: 08/068,394
; FILING DATE: May 24, 1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Malaska, Stephen L.
; REGISTRATION NUMBER: 32,655
; REFERENCE/DOCKET NUMBER: 2813-C
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; TELEPHONE: (206) 587-0430
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; TELEX: 756822

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